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DENTAL Digest

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THE DENTAL Digest

VOL. 48 NO. 7

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708 *Church Street, Evanston, Illinois*

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Kenneth Francis Mitchel received his D.D.S. from the University of Pittsburgh School of Dentistry in 1928. He is a general practitioner who writes for us for the first time. The photographs for the present article were taken and arranged specifically for The Digest by Homer and Dorothy Sterling.

Don E. Woodard, D.D.S., M.S.D. (1923, State University of Iowa College of Dentistry, and 1930, Northwestern University Dental School) has on several occasions been a Digest author, the last time in October, 1941 when he discussed the reception, treatment and care of the surgical patient. His present article on circumferential wiring for edentulous jaw fractures is in line with the current and growing need for dentists to know as much as possible about fractures and oral surgery in general.

Menifee R. Howard, D.D.S. (Colorado College of Dental Surgery, 1907) is a frequent dental writer, clinician and lecturer, and specializes in oral surgery. In August, 1937, he described for us his operative technique for the impacted cuspid. Doctor Howard's technique for the removal of the impacted upper third molar presented here was to have been demonstrated at the Boston meeting of the American Dental Association.

Samuel Cartin has his D.D.S. from Ohio State University College of Dentistry (class of 1934). Doctor Cartin is the author of numerous articles on exodontia and particularly anesthesia. In November, 1940, he wrote for us about Surgical Exodontia without the Aid of Mallet and Chisel.

Milton Tuerk earned his Bachelor of Arts at Johns Hopkins University (June, 1937), and in June, 1941 the D.D.S. at New York University College of Dentistry. Doctor Tuerk is in general practice. This is his initial appearance, but an article on the repair of broken porcelain pontics with acrylic is scheduled for future publication.

Jerome M. Schweitzer, D.D.S. (New York University College of Dentistry, 1918; B.S., College of the City of New York, 1927) has been a regular Digest contributor since June, 1935, with a long list of titles to his credit, the last time in March, 1941, when he discussed the problem of The Deep Bite.

I. P. Hayes is a graduate of Northwestern University Dental School, the class of 1902. Doctor Hayes is a general practitioner and has been a member of the Wyoming State Board of Dental Examiners for many years.

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Muscle-Trim and Tissue Control in Immediate Dentures

K. F. MITCHEL, D.D.S., Pittsburgh

DIGEST

Impressions used in immediate denture construction have, as a rule, been of the type known as snap impressions in which little effort is made toward muscle-trimming or tissue control.

The technique illustrated here considers both these factors and permits a precision impression for the immediate denture comparable in accuracy to the impression for the edentulous mouth.

2552 *Brownsville Road.*

First Appointment:

Place compound in water of 135°. While this is softening, roentgenograms are taken of the teeth to be removed as well as of all edentulous areas. Take snap impressions of both arches. The patient is then dismissed.

First Laboratory Procedures:

1. Pour the model. Mark the peripheral outline. Mount on a surveyor. Determine best path of insertion to allow baseplate to pass the remaining natural teeth and to give maximum flange width. With point of surveyor, trace line on model to eliminate undercuts.

2. Score this line and the peripheral outline with a sharp instrument. (The surveyor need not be elaborate or absolutely accurate. Model may be seated in modeling clay on small ground glass slab. Surveyor point may be pin-clamped securely in vertical position.)

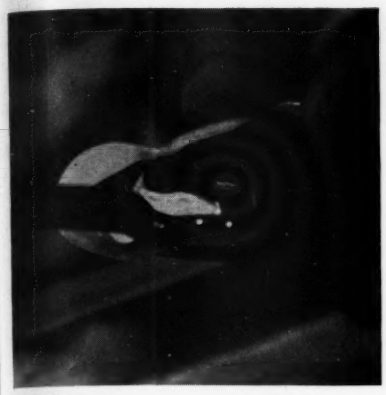
3. Adapt a sheet of base-plate wax over model. Trim to the pencil line which can be seen through the wax. Lute base-plate wax to model. Add a strip of wax one-eighth inch wide across posterior border and around periphery for rigidity in the finished baseplate.

4. Trim the plaster teeth and flask the wax pattern in the same position that it had on the surveyor. Boil out, pack in molding acrylic, and, after curing, trim any rough edges.

Second Appointment:

1. Try-in the acrylic tray. With soft pencil, mark any encroachments on movable tissue. Correct discrepancies. Make sure tray can go to position without interference from the remaintaining natural teeth. If any correction is necessary, it should be made at this time.

2. With low-fusing compound, trace two triangular areas (base at post dam) running forward about half way on each side of the raphe. Flame and temper. Place in position. Hold under heavy pressure until compound chills. Remove. Trim excess from posterior border.

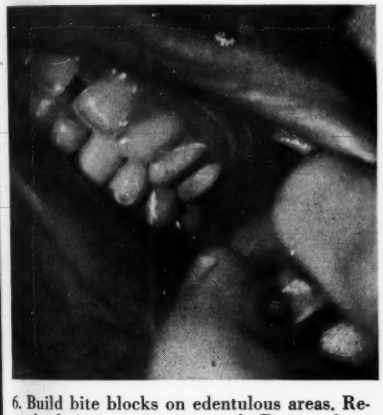


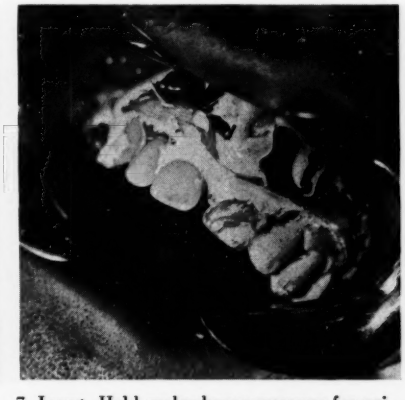
Second Appointment (continued)

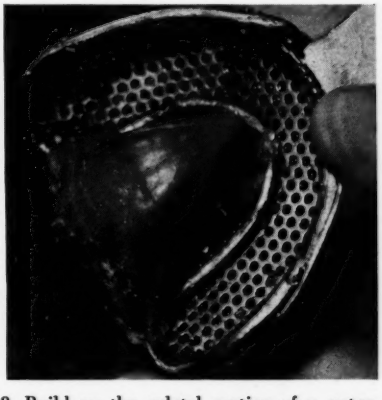
3. Add compound to the left buccal periphery. Muscle-trim, following usual procedure; namely, the opposite buccal, then the two labial areas. Free the labial frenum and the two buccal muscle attachments, so that they will meet no resistance in the final impression.

4. Add additional compound to the buccal surface of the flange in the area of the tubercle. Flame lightly, temper, and return to the mouth. Have the patient move the mandible in lateral excursion to the opposite side.

5. The ramus determines the thickness of the flange, giving peripheral adaptation and tissue support in this area. Repeat on the opposite side.



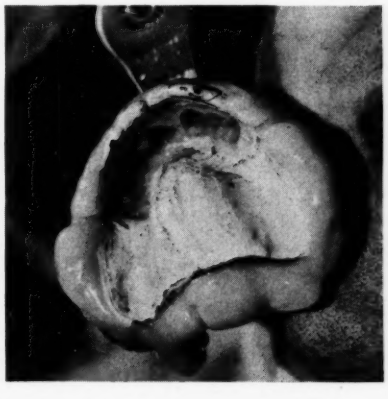


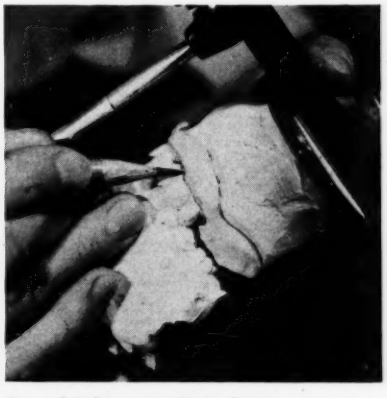


6. Build bite blocks on edentulous areas. Record relation to opposing teeth. Remove from mouth. Chill.Trim bite blocks to allow 1 mm. clearance from the proximating teeth. Dry baseplate. Apply thin coating of one of the zinc oxide eugenol pastes (not thermoplastic wax or resin which will distort under high temperatures).

7. Insert. Hold under heavy pressure for primary setting. Muscle-trim. Hold until completely set. Chill. Remove from mouth. Immerse in cold water several minutes. Trim away any material blocking opening left for natural teeth.

8. Build up the palatal portion of a water-cooled tray with base-plate wax. Seat this firmly so that acrylic tray is held solidly in position. Remove water-cooled tray from mouth and trim places where wax may have come in contact with natural teeth or bite blocks.





9. Fill empty portions with hydrocolloid and seat this firmly in position under steady pressure in the center of the vault. This will support the acrylic tray during this part of the impression technique. Chill as rapidly as possible and remove from the mouth.

10. The acrylic tray should come out in the hydrocolloid and should not be disturbed. Determine the mold and shade of the teeth to be used and dismiss the patient.

Second Laboratory Procedures:

1. Pour model. When set, remove hydrocolloid impression but do not disturb acrylic tray. Mount models on articulator. Mark points corresponding to the septal crests (determined by roentgenograms). Connect points with a pencil line.

Second Laboratory Procedure (continued)

2. Draw a second line 1 mm. incisally, parallel to the first line.

3. Cut away teeth on one side of the model.

4. Trim plaster down to the second line. Set up anterior teeth on this side. Repeat on the opposite side. Set posteriors. Wax the case, being careful that the compound and paste are not softened by heat. Flask the entire unit. Process and finish the denture.

Appointment 3

1. Mark points on the mucosa at the height of the septal crests (determined by roentgenograms), and, as on the plaster model, draw a line 1 mm. incisally to these points, but this time draw the line with a scalpel, incising through the periosteum.

2. Remove this strip of soft tissue. Extract the teeth, curet thoroughly, and trim any diseased bone from the interproximal septums. Pack the sockets with sulphanilamide powder or tablets. Suture lightly, using blanket stitch or continuous running stitch.

3. Insert denture. No interference should occur. Correct any discrepancies. There should be no abnormal pressure at any point, particularly in the area of surgery. Remove and paint denture with benzocain ointment. Insert. Instruct patient not to remove until next visit within forty-eight hours.

WAR BOND AWARD WINNER

DOCTOR A. M. BRADLEY of Muskogee, Oklahoma, has been selected by a vote of his dental colleagues as the author of the best article[1] published in The DENTAL DIGEST during the six-month period from January through June, 1942. In recognition thereof this magazine has presented the winner with a certificate of the readers' choice and a $100 United States War Savings Bond.

Readers will have an opportunity to vote again in December for the next award to be conferred in January, 1943.

[1]Oral Defense Through Occlusal Stress Reduction, June, P. 277.

Circumferential Wiring Simplified for Edentulous Jaw Fractures

DON E. WOODARD, D.D.S., M.S.D., Kansas City, Missouri

DIGEST

Stainless steel wire in a small gauge is used for circumferential wiring in the treatment of edentulous jaw fractures. Four wires are usually placed to stabilize the mandible: one on each side of the fracture line and two on the opposite side to balance the retention. External incisions are not required in the simplified method of application suggested.

In fractures of edentulous mandibles circumferential wiring over an existing denture or splint is often the method of choice. The application of the wires around the mandible has been a rather complicated procedure, difficult to carry out with any degree of accuracy. Usual methods demanded external incisions with resultant small scars and considerable trauma.

The development of stainless steel wire in small gauges of extreme strength has made the technique suggested here practical and exceedingly easy to use.

The method may be used in fractures of the mandible when the fracture is in the body of the mandible between the extremities of the denture or a constructed splint. The method is likewise applicable in some multiple fractures.

General anesthesia is preferable, although a local anesthetic may be used in selected cases; however, as it is usually necessary to use considerable manipulation and pressure in aligning the fragments, the former is more practical. Pentathol sodium is ideal when it can be employed, and is used in the majority of my cases.

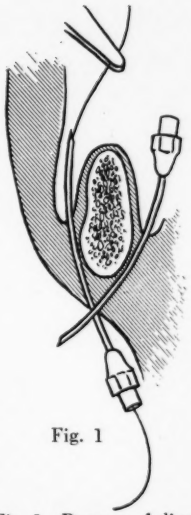


Fig. 1

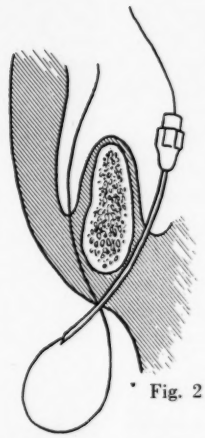


Fig. 2

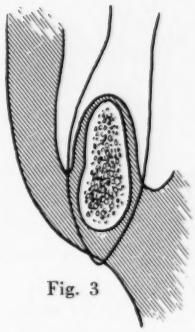


Fig. 3

Fig. 3—Intra-oral needle has been withdrawn and wire is around the mandible.

Fig. 2—Wire on extra-oral side threaded in lingual needle, emerging from the hub portion of the needle intra-orally.

Fig. 1—Passage of disto-lingual needle downward and outward, close to the bone, to emerge on the skin below the border of the mandible and distal to the fracture. The buccal needle is introduced extra-orally and is inserted upward into the buccal sulcus. The stainless steel wire is shown inserted in the buccal needle intra-orally and emerging extra-orally.

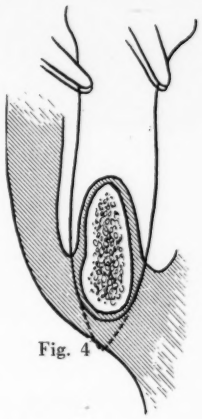


Fig. 4

Fig. 4 — Each wire being pulled back and forth until it cuts its way up to and tightly against the mandible.

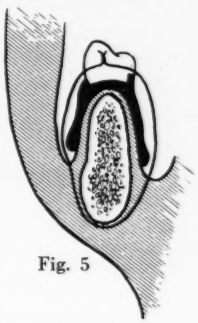


Fig. 5

Fig. 5 — Wires tightened and twisted over the splint.

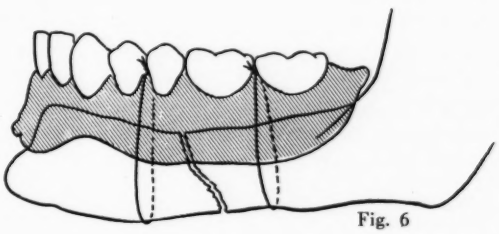


Fig. 6

Fig. 6—Wires in vertical position, holding fragments firmly in place.

Armamentarium

The following equipment will be required:

1. Two-inch 21 gauge stainless steel

Luer hypodermic needles are used. They are bent to whatever contour is required.

2. Stainless steel wire, .012 gauge, in 12 inch lengths.

3. Two hemostats.

4. A suitable splint.

5. Tongue retractors.

6. Wire cutters.

Procedure

Four wires are usually placed to stabilize the mandible: one on each side of the fracture line and two on the opposite side to balance the retention.

1. Skin surfaces are prepared for the introduction of the needles.

2. The splint should be in place in the mouth when the needles are introduced. This is to permit an accurate positioning of the wires with regard to the mesio-distal and peripheral relationship with the splint. While the tongue is held to one side with a retractor, the disto-lingual needle is first introduced intra-orally. Keeping the needle close to the bone, it is passed downward, and, because of its curve, outward to emerge on the skin below the border of the mandible and distal to the fracture (Fig. 1).

3. The disto-buccal needle is then introduced extra-orally alongside the point of the intra-oral needle where it emerges on the skin. It is passed upward around the mandible buccally and through the mucosa at the deepest point in the muco-buccal fold directly opposite the lingual needle.

4. A 12 inch length of .012 stainless steel wire is then inserted at the point of the buccal needle and threaded through the lumen until it emerges at the hub portion. It is grasped by a hemostat and held while the needle is withdrawn.

5. The other end of the wire on the extra-oral side is then threaded into the point of the lingual needle until it emerges at the hub portion of the needle intra-orally (Fig. 2).

6. The intra-oral needle is then withdrawn and the wire is around the mandible.

Fig. 7—Roentgenographic print showing wires in place.

7. The slack is pulled in and each wire is grasped by a hemostat about 2 inches above the point of emergence, and the wire is pulled back and forth until it cuts its way up to and tightly against the mandible (Fig. 4). This must be carefully and thoroughly done or the impinged fascia will cause a dimple.

8. When all wires are in place the fracture is reduced within the confines of the splint, and while being held tightly in place the wires are tightened and twisted over the splint (Fig. 5). The wires should be in as near a vertical position as possible and should hold the fragments firmly in place (Fig. 6).

9. Following this procedure an elastic bandage is beneficial in giving support to the mandible.

10. The wounds, where the wires emerge into the mouth, are painted three times daily with tincture of methyolate, and copious intra-oral irrigations are used frequently.

The introduction of the wires in this manner greatly simplifies the operation and can be done in less time than it takes to tell it.

The same method of introduction can be used when through-and-through wires are needed in maxillary fractures.

409 *Professional Building.*

Removal of Impacted Upper Third Molar

MENIFEE R. HOWARD, D.D.S., Denver

DIGEST

The removal of the impacted upper third molar is complicated by its anatomic relationship to the maxillary sinus and the parotid gland as well as by the difficult visibility, and breaking of the roots owing to their extreme curvature.

Thin-bladed instruments with proper angulation for anatomic adaptability have simplified the problem.

The technique of removal advocated here has as its aim simplicity of operation with consequent minimum postoperative discomfort, swelling or trismus.

THE IMPACTED UPPER or maxillary third molar has not been sufficiently discussed in the dental literature. There has rarely been an article referring to technique and few instruments have been made which are adaptable to the impacted upper third molar. A wide variation of conditions are presented—from being the least to the most difficult tooth to remove. Its anatomic relationship makes it subject to numerous problems. Among these problems are: a) proximity to maxillary sinus; b) proximity to parotid gland; c) interference with operator's vision; d) danger of breaking roots; e) danger of fracturing floor of sinus. The degree of curvature of the roots is greater in the impacted maxillary third molar than any other tooth in the mouth. Should a root break, the operator's visibility is interfered with because of the upward curvature of the arch, fullness of cheeks, and anatomy of the lower arch; consequently, there may be considerable difficulty in the removal of this tooth, including the danger of a broken root passing into the maxillary sinus and of opening into the parotid gland.

Instrumentation

The technique to be described has been tried for twenty years. During this time the old, crude instruments, lacking proper angles and having thick blades with limited use, have been modified in shape and angle. Thinner blades are now used which have made them more adaptable anatomically to the crown of the tooth and interproximal space.

Technique

1. An incision is made from the disto-buccal area of the second molar, extending distally and slightly toward the buccal to a length of about five-eighths inch. The incision should be of sufficient length to permit easy access and removal of the tooth (Figs. 4 and 5).

2. The mucoperiosteum is reflected with a periosteotome, beginning at the point of incision, and reflecting the soft tissue buccally around the gingiva of the second molar toward the buccal, almost midway of the second molar, that is, between the mesial and distal roots of the second molar. This tissue is then reflected slightly lingually from the point of incision; an opening is permitted large enough for limited observation and for release of the tooth through the opening (Fig. 6).

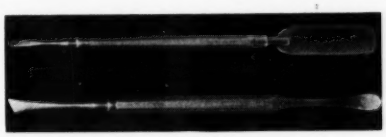


Fig. 1—Top, Howard cheek retractor; bottom instrument, Howard periosteotome.

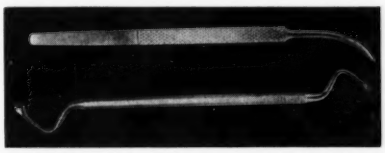


Fig. 2—Top, Austin lance; bottom, Lucas curet.

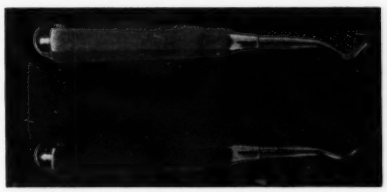


Fig. 3—Howard right and left elevators.

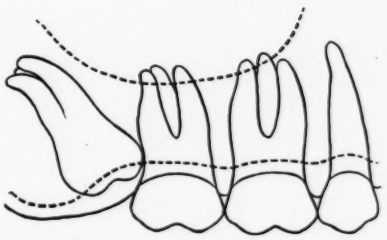


Fig. 4—Type of impacted maxillary third molar which can be satisfactorily removed by the technique described.

3. *Removal of the Tooth*—The elevator (Fig. 7) is applied to the buccal surface over the crown of the impacted tooth. Usually the interproximal space at this point is limited; hence, the desirability of the thin blade, such as is used in this form of elevator. By pressing the elevator over the mesial-buccal surface of the crown from its distal aspect, the elevator is allowed to pass upward and inward, and gradually, by moderate pressure, into the space under the crown of the third molar. The curvature of the elevator permits its being rotated under the crown, gradually pressing it under the crown and toward the lingual.

Pressure is applied all along, and the tooth usually loosens with the first few applications of a rotating pressure. If it does not, the instrument is pressed and rotated toward the lingual. This form of pressure is not used as a gouge, but rather, with the bony process used as a fulcrum, the lower part of the blade is used in a rotating or tilting method, to tilt the tooth downward and outward. Heavy pressure or force in elevating the tooth is usually not necessary and may

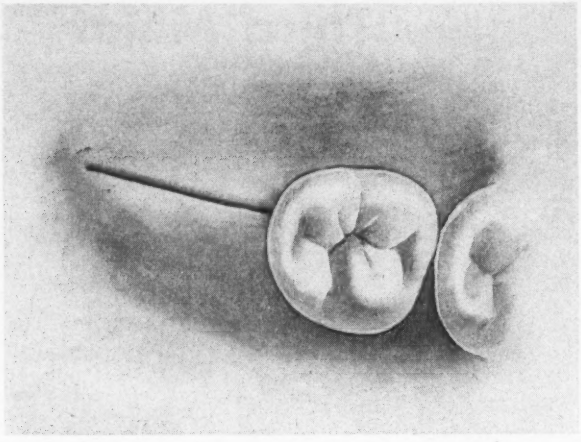


Fig. 5—Incision from disto-buccal of second molar obliquely toward distal and slightly buccal.

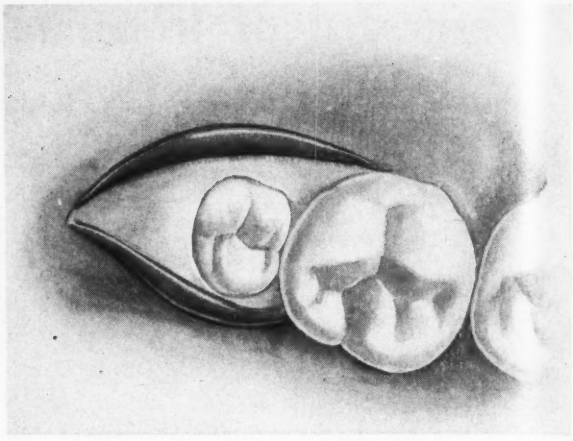


Fig. 6—Reflection of mucoperiosteal flap from buccal and slightly toward lingual with periosteotome.

break a root, or cause other injury. Greater force may be needed at first in gaining entrance under the crown or in passing through soft, thin bone.

The point of the elevator may be passed entirely to the lingual with final pressure applied from the lingual. This permits the heavier bone structure to be used as a fulcrum. The pressure as applied depends on the resistance and curvature of the roots. The average curvature of upper third molar roots is disto-buccally. Should this curvature be distally, the root is released by a pressure of the elevator from its mesial aspect. If the root is curved disto-buccally, or buccally, the pressure of the elevator extends more toward the lingual, and the tilting force may be entirely from the lingual, rolling the tooth crown outward in the final release, even entirely toward the buccal (Fig. 8).

In the average case (Fig. 4), or in the tooth that is embedded but not inclined at more than a forty-five degree angle, the tooth is released without any necessity for previous removal or overlying bone tissue. The elevator, when necessary, may be pressed or forced through soft bone.

4. *Removal of Spicules*—After such tooth removal, a sharp curet is used to remove any fractured spicule of bone, and to smooth rough edges of bone wherever they are found around the socket. Care should be exercised that rough edges are not left on bone structure; otherwise the gum tissue resting upon such areas will become irritated, and pain or discomfort will result. The right and left file designed by me may be useful for this purpose.

5. *Closure*—After careful inspection with curet and palpation with the finger to detect spicules of bony process, the closure is made (Fig. 5). If all details are carried out according to this technique, no sutures are necessary; however, some cases may occur in which the tooth crown is on the lingual, or the lingual bone is removed, and the gum flap does not approximate of its own accord. In such instances a single suture may be necessary, as shown in Fig. 9.

With this technique applied properly fracture of a root seldom occurs; however, in case of a broken root tip, free access is desirable in order to prevent the broken root tip from being pushed into the maxillary sinus. Careful use of the elevator, controlled pressure, and unhurried operating will aid greatly in obtaining best results.

6. *Modified Incision*—Fig. 10 shows a modified type of incision used in extremely difficult cases, with the tooth at

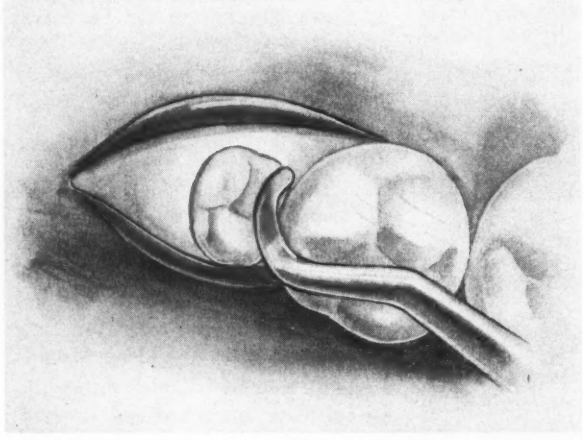


Fig. 7—Application of Howard elevator to mesial of crown of impacted molar.

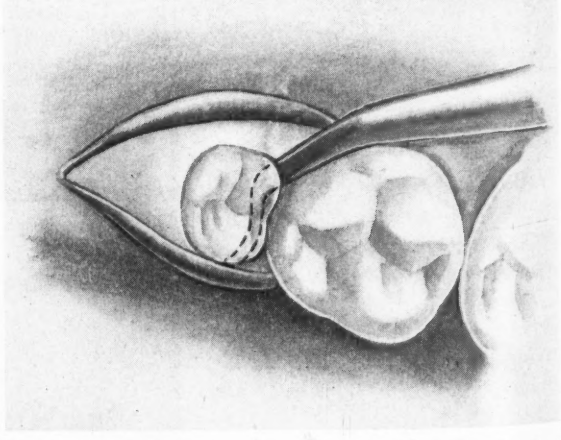


Fig. 8—Pressure being exerted by elevator point at lingual surface and tooth released with crown tilted buccally.

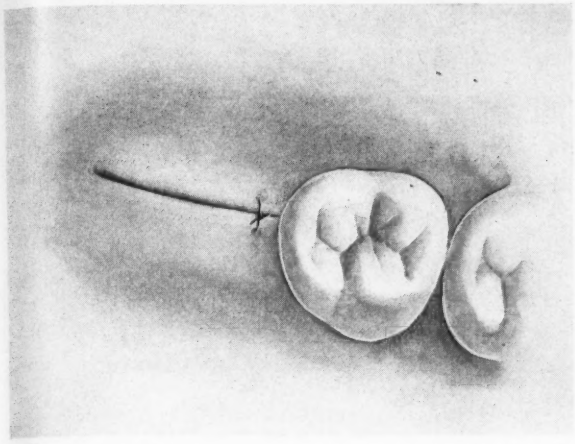


Fig. 9—Closure, using one suture.

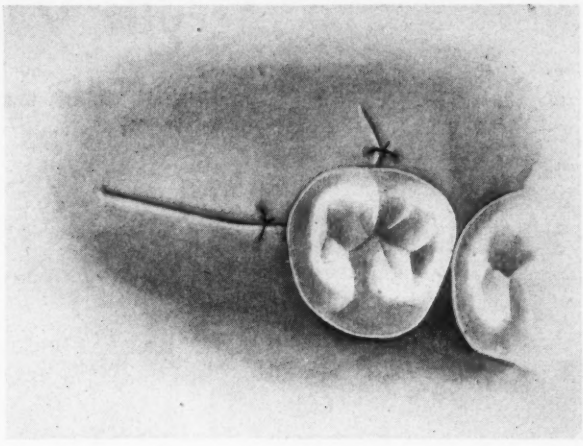


Fig. 10—Modified incision for deep-seated impactions with tooth at right angle to second molar; two sutures are used.

right angles and the crown well up toward the end of the root of the second molar, or lying on the floor of the maxillary sinus. This type of incision may also be used in cases of broken roots. When this incision is necessary, and reflection of the mucoperiosteum is made, there is greater opportunity for observing the tissue at the apexes of the root-ends of the second molar, as well as for observation for any chiseling that may be necessary over the crown of the embedded third molar.

When this type of incision has been made and chiseling accomplished over the crown of the tooth, the release of the tooth may be accomplished in the same manner, and with the same instrument as previously described. In this case, a suture is used on the buccal as well as the distal place of incision. Sutures, if used, are removed within three days.

It is seldom necessary to use forceps in any of the steps in the removal of the impacted upper third molar. The only occasion is after the tooth has been fully loosened; forceps may then be used as the final medium for removing the tooth, so that the tooth will not fall into the floor of the mouth.

Postoperative Results

Because of the simplicity of the operation, there is a minimum of postoperative discomfort, swelling, or trismus. Swelling is seldom noticeable outside the jaw, nor is there interruption of normal opening and closing of the mouth. Dry sockets or the need of packing of any kind are exceptional.

Summary of Advantages

The technique described offers the following specific advantages:

1. Less operative time is necessary than in other techniques. All types of impacted maxillary third molars may be removed within five to thirty minutes.

2. Less bone removal is required. Chisels are used only in exceptional cases. Bony structure formerly chiseled away is now used as a convenience and a fulcrum in removal of the tooth.

3. There is less postoperative pain and discomfort.

4. There is less tendency for the blood clot to break down and form a dry socket.

5. There is less likelihood of injury to adjacent structures, particularly to the parotid gland and maxillary sinus.

6. Conservation of bone adjacent to the second molar and on the lingual is made possible. This insures longer retention of the second molar, and conservation of the tuberosity for possible later dentures.

846 *Metropolitan Building.*

THIS MONTH'S COVER

Hundreds of magazines, including THE DENTAL DIGEST, are this month using the American flag as a cover illustration. The flag on THE DENTAL DIGEST's cover was photographed for us by Homer and Dorothy Sterling. It appears also on the cover of this month's *Oral Hygiene.*

The Boston Meeting of the American Dental Association, scheduled for August 24-28, 1942, has been canceled.

Acrylic Veneer Crown

MILTON TUERK, D.D.S., Bronx, New York

DIGEST

This illustrated technique describes the construction of an acrylic veneer crown which may be used on a single tooth, or as an abutment for a fixed bridge.

The only visible gold is on the linguo - gingival margin of the finished restoration, although the margins of the preparation, with the exception of the buccal, are in gold. The occlusal, buccal, and proximal surfaces are finished in acrylic resin.

Because the buccal surface has no underlying gold, it is simpler to obtain the correct shade.

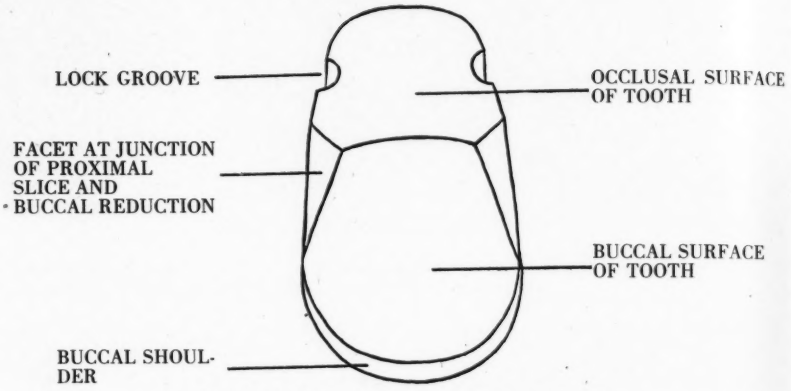

LOCK GROOVE
OCCLUSAL SURFACE OF TOOTH
FACET AT JUNCTION OF PROXIMAL SLICE AND BUCCAL REDUCTION
BUCCAL SURFACE OF TOOTH
BUCCAL SHOULDER

Fig. 1—Occluso-buccal view of tooth preparation.

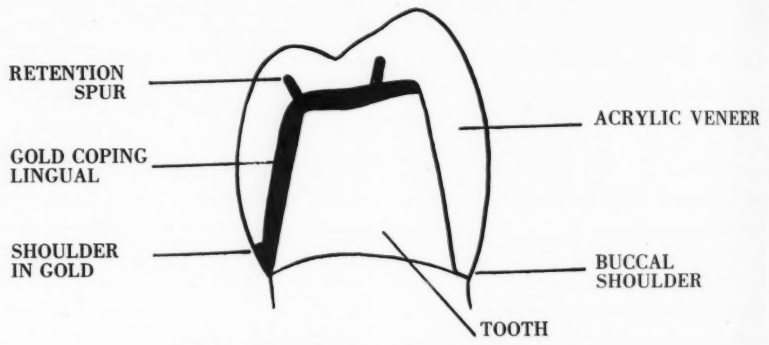


Fig. 2—Bucco-lingual section of finished veneer.

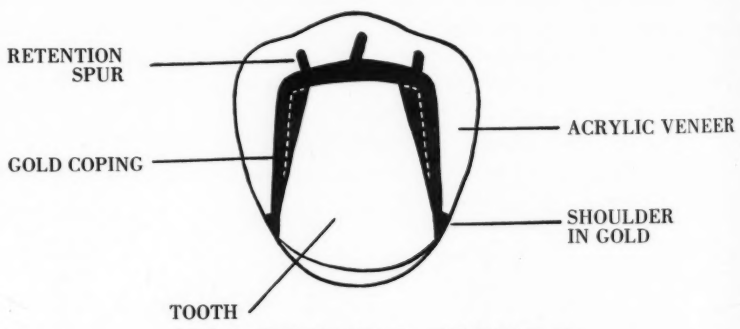


Fig. 3—Mesio-distal section of finished veneer.

THE MAIN OBJECTION to the use of an acrylic veneer crown is the translucency of the material. If any gold is left as a base it shines through the overlying veneer and spoils the shade. The type of veneer I have in mind can be used on a single tooth, or as an abutment for a fixed bridge. The retention of the preparation is comparable to that of a cast three-quarter crown. There is no visible gold; thus this type of restoration is extremely esthetic. The procedure can be performed in the dental office by anyone who has had any experience with acrylics.

Technique

1. The tooth is excavated, if carious, and properly sterilized and filled with cement.

2. The tooth is prepared as for a three-quarter crown, with mesial and distal slices. The slices are made with a seven-eighths inch carborundum disc.

3. The lingual is reduced with a stone.

4. The occlusal is relieved as if for the preparation of a porcelain jacket.

5. The buccal is prepared as for a porcelain jacket.

6. A shoulder is prepared on the buccal and is brought under the gingival margin. (The accompanying photographs show a shoulderless buccal preparation; however, I prefer the shoulder type.)

7. Two lock grooves are prepared on

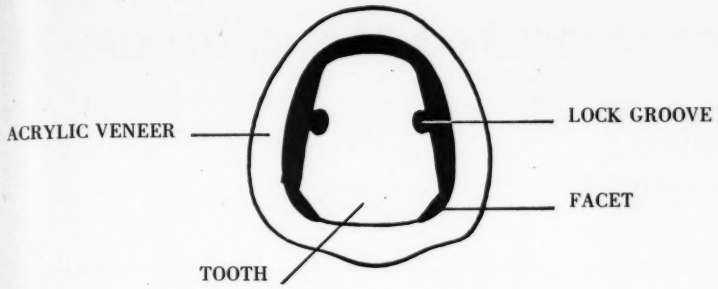


Fig. 4—Coronal section of finished veneer.

Fig. 9—Lingual view of finished veneer. The only visible gold is on the lingual at the gingival.

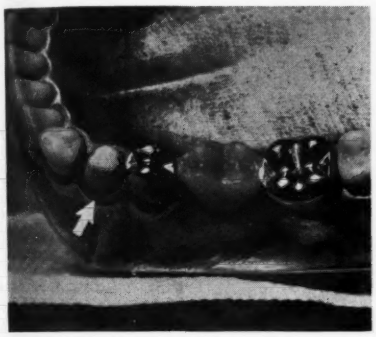


Fig. 5—Occlusal view of tooth preparation for lower left first bicuspid. Note proximal grooves, complete removal of all undercuts. There is no shoulder on this preparation.

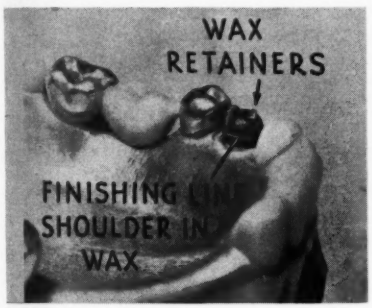


Fig. 6—Lingual view of wax-up of gold retainer. Note finishing line in wax near gingival. Retention spurs on occlusal.

Fig. 7—Buccal view of wax-up. No gold on buccal surface.

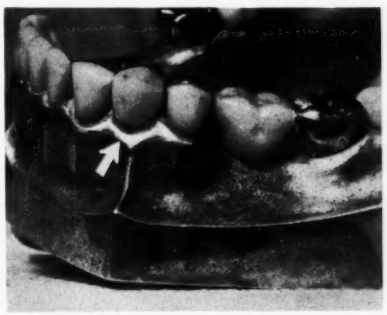


Fig. 8—Bucco-occlusal view of finished veneer. No gold visible on buccal, occlusal or proximal. Buccal-gingival margin is finished in acrylic—all other gingival margins are of cast gold.

Fig. 10—View inside finished veneer. Gold is confined to lingual three fourths of tooth.

the mesial and distal slices with a 701 fissure bur.

8. At the junction of the proximal slice with the buccal reduction a facet is made with a small garnet disc. This facet provides an extra thickness of acrylic at one of the weak spots of the gold-acrylic joint.

9. The gold retainer may then either be waxed direct, or a compound band impression may be taken and the entire procedure performed on an amalgam die. The retainer is waxed as for a three-quarter crown, the entire buccal being left open. A ledge or finishing line is cut into the wax from 1 mm. to 2 mm. above the gingival margin. Small wax retainers are placed on the occlusal to aid in the retention of the acrylic. The wax pattern is removed and cast, and fitted back to the tooth or die. If the wax pattern has been made directly in the mouth, then a full-banded compound impression is taken of the tooth preparation at this stage, and an amalgam die is prepared.

10. A wax bite is taken, as for a porcelain or acrylic jacket, and models are poured and articulated with the die in position. Tin foil, .001 gauge, is adapted to the buccal and brought over the shoulder. The gold retainer is placed into position over the tin foil.

11. A wax-up is now made in ivory inlay wax. The wax is carved into occlusion, and on the lingual the wax is finished at the finishing line created in the gold.

12. The entire gold-wax veneer is then invested as for an acrylic jacket and processed to the correct shade.

In the finished restoration, the only visible gold is on the linguo-gingival margin, although the margins of the preparation, with the exception of the buccal, are in gold. The entire occlusal, buccal, and proximal surfaces are finished in acrylic resin. The buccal surface has no underlying gold; hence it is simpler to obtain the correct shade.

If the preparation is a bridge abutment, then the gold retainer is soldered to the pontics and the entire bridge is completed and tried in the mouth before continuing with the acrylic processing.

2264 *Creston Avenue.*

Removal of an Impacted Mandibular Third Molar

SAMUEL CARTIN, D.D.S., Toledo, Ohio

DIGEST

The modification of an original presentation by M. Hillel Feldman on A SIMPLE TECHNIQUE FOR THE REMOVAL OF AN IMPACTED MANDIBULAR THIRD MOLAR[1] is being presented.

In this article reference is made to a mesio-angular impaction, according to the George Winter classification, in which the crown of the impacted third molar is directed at the mesial angle against the distal aspect of the second molar.

In the technique described here the need for surgery of the bone in the region enveloping the root aspect of the third molar is minimized. In its stead there are two main stages: (1) the removal of the bone directly overlying the crown, and (2) the sectioning of the tooth with the impactor preliminary to the delivery. The successive steps of the technique are given with the accompanying illustrations.

A TECHNIQUE FOR the removal of an impacted mandibular third molar was presented by Doctor M. Hillel Feldman.[1] At that time he described the removal of the crown of the impacted third molar by using mounted stones and the drill that he designed to hollow the crown so that it might be split away from the root. This portion of Doctor Feldman's technique has been changed here to the use of the impactor for splitting and for sectioning the root. The use of the impactor is not new. Doctor Welden E. Bell[2] of Texas discussed a technique for sectional removal of impactions, and Doctors Harry J. Field and Alfred Ackerman[3] of Newark, New Jersey, also discussed the use of the impactor for sectioning teeth.

Toledo Medical Building.

[1]Feldman, M. H.: A Simple Technique for the Removal of an Impacted Mandibular Third Molar, DENTAL DIGEST, 38:310 (September) 1932.

[2]Bell, W. E.: A Technique for Sectional Removal of Impactions, DENTAL DIGEST, 44:294 (July) 1938.

[3]Field, H. J. and Ackerman, Alfred: The Impacted Lower Third Molar, J. A. D. A. 25:1053 (July) 1938.

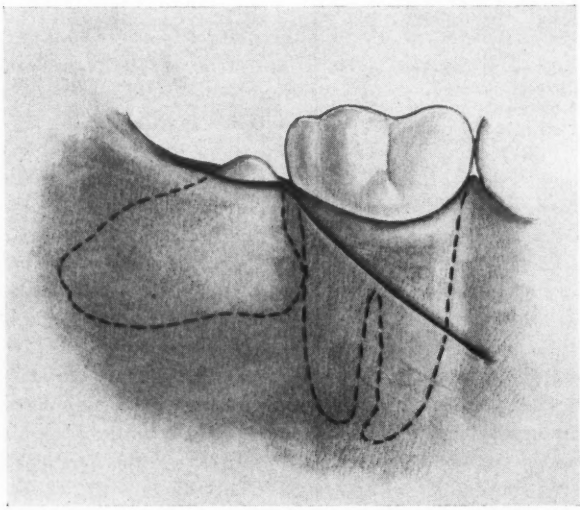


Fig. 1—Step 1: The incision is made with a bard-parker knife number 3 and the number 15 blade. The line of incision extends from a point well up in the retromolar triangle forward to the distal of the second molar. From the disto-buccal aspect, the buccal or even the mesio-buccal aspect of the second molar, the line of incision extends forward and downward toward the muco-buccal fold.

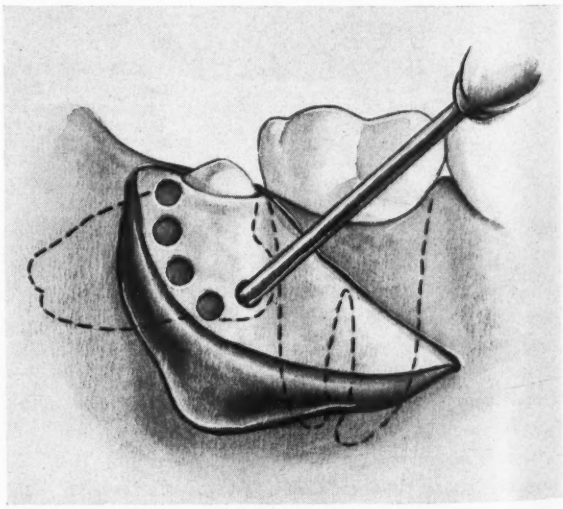


Fig. 2—Step 2: The mucoperiosteum is reflected from the bone. While it is held away from the bone with a retractor, the Feldman drill is directed into the bone over the crown of the impacted molar. Holes are made until the crown is encircled. The drill openings are contiguous to one another.

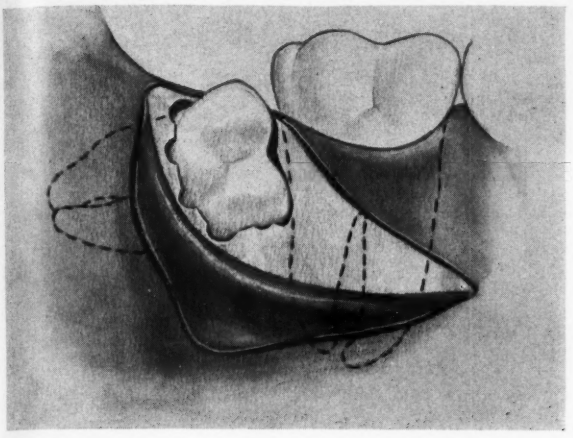


Fig. 3—Step 3: A sharp instrument is applied to one of the openings made in Step 2 (Fig. 2), and the bone is cleaved off and away from the crown. The crown is shown clearly freed of the bone. Only the root is covered by bone now. The crown is then split with the impactor.

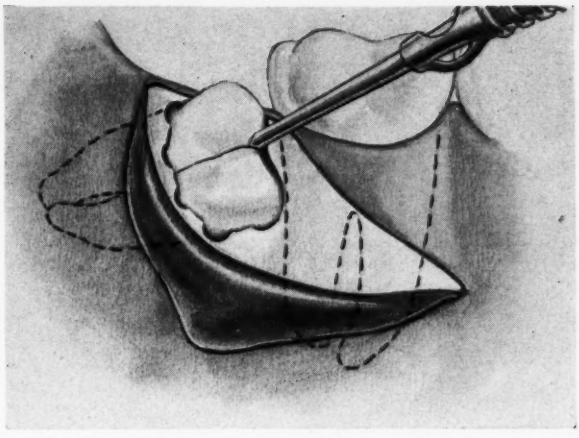


Fig. 4—Step 4: The tooth is split with the impactor. The upper portion of the tooth is removed. The lower embedded portion remains to be removed with the drill and patholever.

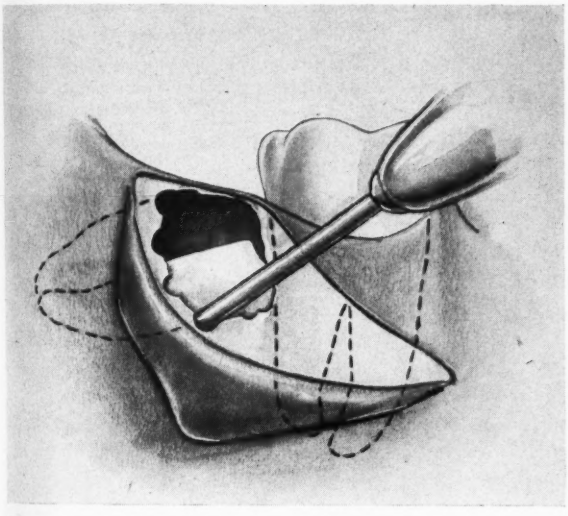


Fig. 5—Step 5: Drill penetrating the bone at the cemento-enamel junction of the embedded portion of the crown.

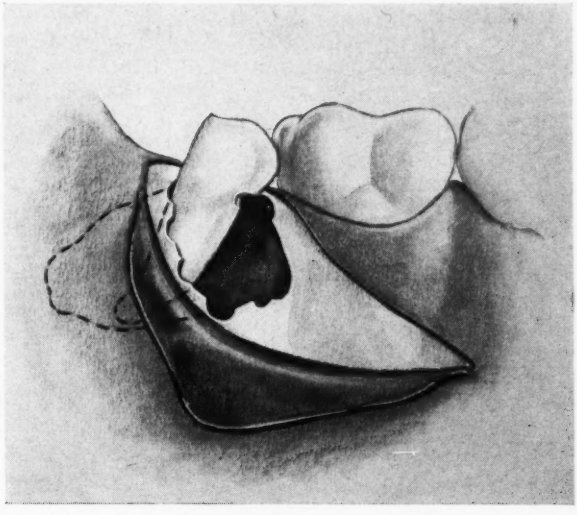


Fig. 6—Step 6: Embedded portion of the tooth lifted upward and outward with the Feldman patholever which was inserted in the hole previously made.

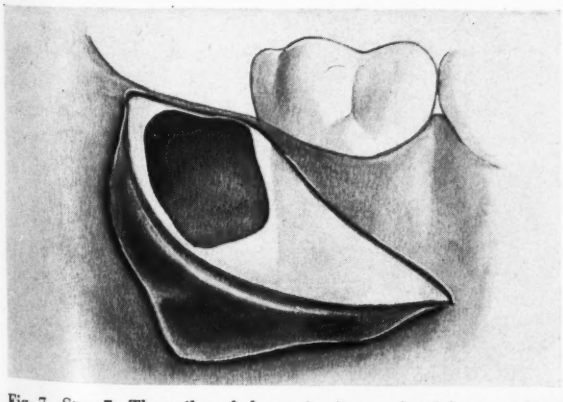


Fig. 7—Step 7: The toilet of the cavity is completed by smoothing all sharp edges of bone with a mounted stone, curet, or bone file.

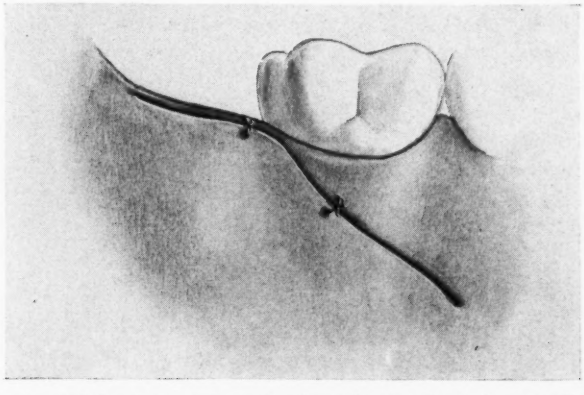


Fig. 8—Step 8: The final step is the suturing of the mucoperiosteum into the position of original attachment. Between the sutures, a vaseline gauze dressing may be introduced into the bone crypt. Such a suggested dressing may be made of equal parts of aristol, acetysalicylic acid powder, and benzocaine incorporated into vaseline to form a paste. This paste is applied to plain or iodoform gauze. When indicated or desired, sulfanilamide, sulfathiazole, or both may be included in the formula.

A Functional Splint for Increasing the Vertical Dimension

JEROME M. SCHWEITZER, D.D.S., New York City

DIGEST

In young patients having a full complement of teeth, removable, functional splints are advised as an intermediate stage in treatment before fixed appliances are indicated to increase the vertical dimension.

The principles of treatment are discussed, and the construction of the splint is outlined with reference to the illustrations representing steps in the technique as applied to an actual case in clinical practice.

Principles of Treatment

IN YOUNG PATIENTS, when a full complement of teeth is present but it is necessary to increase the vertical dimension in order to prevent anterior trauma and an ensuing pathologic condition, the wisest procedure is to effect the smallest increase to the existing posterior vertical dimension as is necessary to obtain a good result. Removable splints are preferable to fixed appliances that require cutting into the natural teeth in such cases. If the desired result is not had at once, it may be recognized in a short time and the splint may be removed. This is not possible in fixed procedures. It is, however, advisable to consider the splint as an intermediate stage in the treatment of young persons having a full complement of teeth. It should be understood that fixed appliances will be indicated at a later date, and at that time the splint may serve as a guide.

Fig. 1—Clinical appearance before treatment.

It is best to approach cases of this type with caution, because it cannot be entirely certain at the outset that any closure of the vertical dimension has taken place in the posterior region. As a matter of fact, the posterior region may be more nearly normal than the anterior region, as in the case to be cited here. Any increase in the vertical dimension, therefore, must necessarily close some of the free way space which is necessary for normal function in the average mouth. The free way space is that space normally found between the upper and lower teeth when the mouth is at rest.

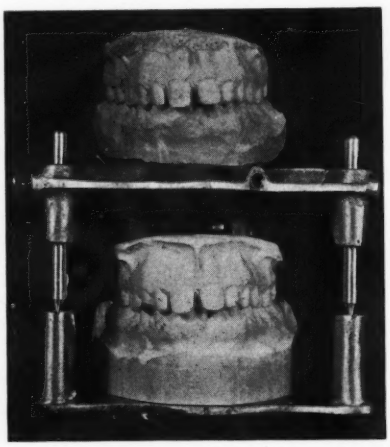


Fig. 2—Duplicate models and occluding frame, designed by the late Doctor Milton Rozsa. Occluding frame performs only the opening and closing movements.

The increase in the vertical dimension in the posterior region would further serve to increase the distance between the origin and the insertion of both the elevator and the depressor muscles of the mandible. It is questionable whether the elongation or shortening of this muscle distance could be maintained without having the muscles return to their initial origin-and-insertion distance and thereby force an intrusion of the posterior teeth. If an accommodation can take place at this increased vertical dimension, before traumatic injury is caused by the effort of the muscles to return to their apparent normal origin-and-insertion distance, then the teeth with their periodontal structures will stabilize themselves sufficiently to permit this increase in vertical dimension. If, however, the muscular effort, in attempting to return to its former origin-and-insertion distance, is too great for the periodontium, then periodontal disease is sure to develop.

Construction of Splint

1. In order to make a splint, it is necessary to take accurate impressions of the maxilla and mandible. These can best be taken with hydrocolloid material.

2. The impressions are poured in a hard stone and mounted on an articulator which has only the opening and closing movements (Fig. 2). The reason for this will soon be seen. The lower model is mounted on the lower frame of the machine.

3. Tin foil is carefully burnished over the teeth; red modeling compound is melted on the tin foil, and a layer of green modeling compound is placed over the red compound. The green modeling compound has a lower melting point. A broad platform is built up, so that when the tin-foil bite is placed in the mouth and the green modeling compound is evenly heated, the upper

Fig. 3—Functional bite-wax in mouth. Any and all registrations of mandible are registered on surface of modeling compound.

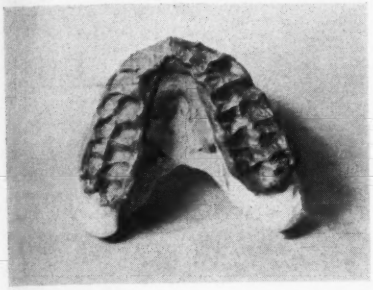


Fig. 4—Functional bite removed from mouth and returned to its position on lower model.

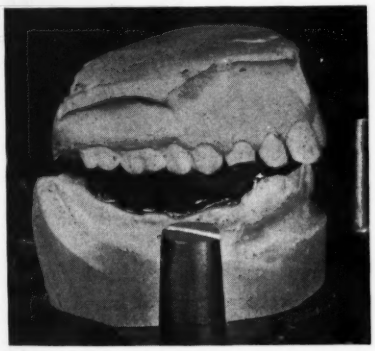


Fig. 5—Lower model is now mounted on lower arm of occluding frame. Upper model is placed in centric position of functional bite. It will now be mounted on upper arm of occluding frame.

teeth may close into it and permit the imprint of the cusps to be formed by gliding laterally and protrusively into this compound. This operation is performed at that increase in the vertical dimension which the operator considers necessary for the particular case (Fig. 3).

4. The modeling compound bite is then removed from the mouth and added to or taken from at any place where discrepancies are found.

5. The modeling compound bite is again introduced into the mouth, and the patient is again asked to bite into it in the lateral and protrusive movements. After the patient has continued to do this for about ten minutes, definite cusp paths are formed, showing all the functional movements of the opposing cusps.

6. The modeling compound bite is removed from the mouth and transferred to its position on the lower model (Fig. 4), and the upper model is placed upon this functional bite wax in the centric position (Fig. 5). This centric position is usually easy to find as the model drops right into place. If there is any doubt about the centric position, an outline of the upper teeth in the centric position may be scratched on the lower model compound, while it is still in the mouth, and the upper model will then be guided by this outline.

7. In this position, the upper model is mounted to the upper frame of the machine. It is removed from its position in the upper frame and the modeling compound functional bite is carefully boxed to the upper frame; a stone model is poured directly on the upper frame of the machine. When this hardens and the machine is opened and the modeling compound bite removed, there remains in stone, an impression of virtually every centric and eccentric bite that the patient is capable of registering at the given vertical dimension (Fig. 6).

8. Cast a frame in either gold or any of the base metals. The metal frame is held in position by clasps on the lower first bicuspids and lower second molars (Fig. 8).

9. The occlusal surfaces of the lower posterior teeth are again tin-foiled and the retaining frame is placed in position over the tin-foiled posterior teeth (Fig. 9).

10. Wax is added to the tin foil and the original upper master model is placed in its position on the upper frame of the articulating machine.

11. The lower wax is now carved, so that when the machine is closed, the articulation is as perfect as is possible to obtain in the open and closed movements (Fig. 10).

12. The upper master model is now removed from the frame of the machine and the functional bite of stone is substituted in its position on the upper frame (Figs. 11 and 12).

Fig. 6—Functional bite has been poured in a hard stone. It may be copper-plated. Here the counter is shown which becomes the upper functional bite.

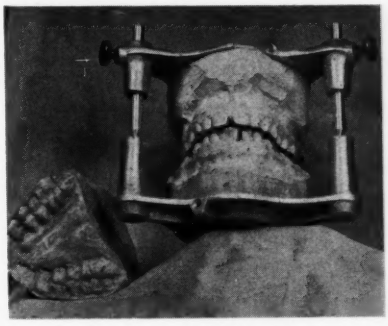


Fig. 7—Distance to which bite is to be raised is clearly shown. Functional bite has been removed. Upper model or functional counter may be substituted for each other.

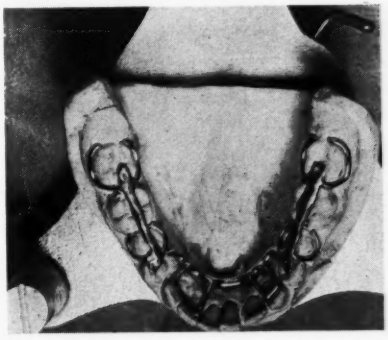


Fig. 8—Framework for splint has been cast. Anterior teeth that have moved are not engaged in the continuous clasp. They may move back to a more normal position when the trauma is relieved.

13. The lower frame, which includes the lower model with the wax splint in position, is now immersed in warm water until the wax is slightly softened, at which time, the upper frame with the functional counter-bite is pressed until completely closed into this softened wax (Fig. 13). Any discrepancies in the wax may be adjusted by carving.

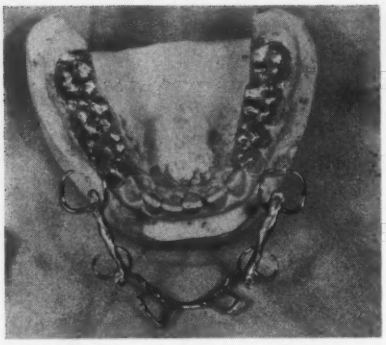


Fig. 9—Tin foil is burnished over lower posterior teeth. Splint frame is returned to model and wax is applied to it.

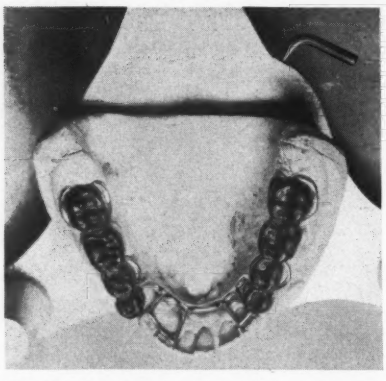


Fig. 10—Wax has been carved to receive only the upper model.

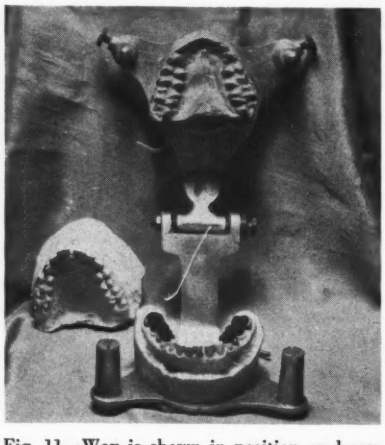


Fig. 11—Wax is shown in position on lower model where it will be carved to articulate with both upper model and functional bite.

A registration is now had both of the centric occlusion and of all the eccentric occlusions that the patient has been able to register. No lateral excursions of the articulating machine are permitted. They are not necessary inasmuch as they are all contained in the functional counter-bite.

14. The upper master model is substituted for the functional bite, to be sure that its position in the lower wax splint has not been changed.

15. When the position is satisfactory, the wax occlusal surface of the lower base metal splint is changed to an acrylic material which resembles the lower teeth in color (Fig. 14).

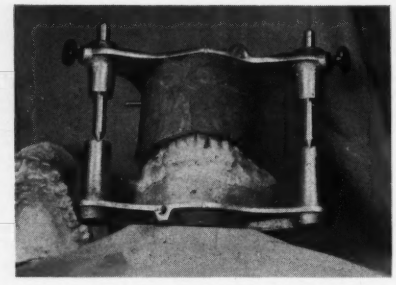


Fig. 12—Functional counter has been closed into lower wax which has been warmed to receive it.

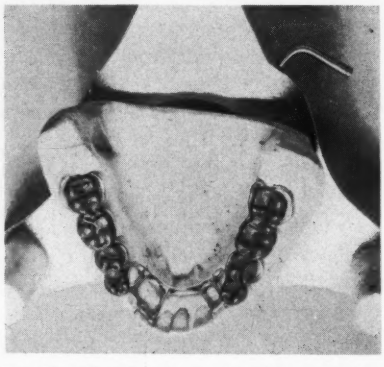


Fig. 13—Wax has been altered by reception of imprints of functional counter. Compare this bite with previous one to note changes.

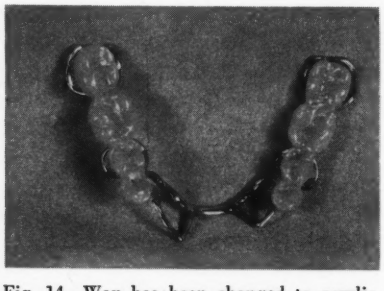


Fig. 14—Wax has been changed to acrylic. Completed splint is shown off model.

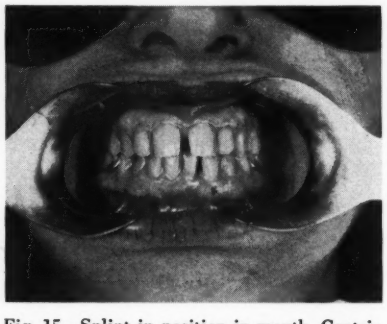


Fig. 15—Splint in position in mouth. Centric movement demonstrated.

Fig. 16—Splint in position in mouth. Right lateral movement demonstrated.

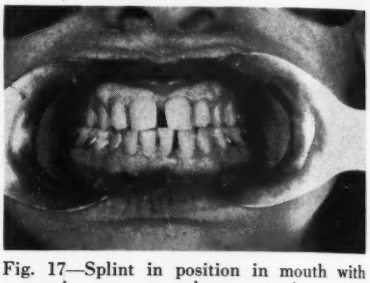


Fig. 17—Splint in position in mouth with protrusive movement demonstrated.

Fig. 18—Splint in position in mouth with left lateral movement demonstrated.

It may be stated here that in making the lower base material frame for the splint, it was made on a duplicate lower model, so that the lower master model was never destroyed.

16. The same method is carried out in the processing of the acrylic material. This is processed on a duplicate model and returned back to the master model.

17. The splint is completed and introduced in the mouth on the lower teeth.

18. The occlusion is rechecked. The case is now completed (Figs. 15, 16, 17, and 18).

At some future date, after the splint has been worn and the improvement noted, fixed appliances may be introduced, with the removable splint used as a guide.

Practical Application

The accompanying illustrations of steps in the technique represent the pro-

cedure followed in a practical case. The patient was a woman, aged 30, who has been under observation for fifteen years.

Clinical Examination—The patient has a full complement of teeth. A deep over-bite is present. The lower anterior teeth strike the lower third of the lingual surface of the upper anterior teeth. The upper lingual papillae have been repeatedly irritated and swollen during the last three or four years. The upper anterior teeth are being pushed forward. The lower anterior teeth, between the lower left central and lateral incisors, have also separated. The lower left lateral incisor is becoming loose.

Roentgenographic Examination — Roentgenograms of the condyle in the opened and closed positions indicate that the position of the condyle heads in the glenoid fossae is deeper than usual. The fibro-cartilage seems extremely thin.

Symptoms—Although the patient presented no pathologic symptoms, she did complain of the constant clenching of her teeth. She would catch herself placing her fingers between the teeth on the left side to relieve the tension.

Treatment—It was decided to place an occlusal splint in position over the lower posterior teeth to increase the vertical dimension in the posterior region and thereby serve to remove the trauma from the anterior teeth. The splint was constructed in accordance with the technique outlined earlier and in keeping with the principles of treatment discussed at the beginning of this article.

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DIFFERENTIATION BETWEEN CHINESE AND JAPANESE

CHINESE		JAPANESE
	1. *General Appearance*	
The Chinese is not markedly shorter in stature than the average American. The average male American is 5 feet, 7 inches or 5 feet, 8 inches tall.	HEIGHT	The Japanese is markedly shorter than the average American or average Chinese.
The Chinese has a well formed body with a definite waistline, like the Caucasian.	BUILD	Japanese have short, stocky legs which seem to be directly joined to the body.
The Chinese has no noticeable beard.	BEARD	Japanese have heavy beards.
Chinese squint.	EYES	Japanese eyes slant toward the nose.
Chinese teeth are straight, even and well formed.	TEETH	Japanese teeth usually protrude and are prominent.
There is a definite bridge to the Chinese nose.	NOSE	The Japanese nose has no bridge.
Chinese walk straight.	GAIT	Japanese shuffle.
	2. *Characteristic of the Feet*	
Chinese feet are normal.		In the Japanese there is a wide separation between the big toe and the first toe caused by the wearing of sandals that have a heavy leather strap separating the large toe from the first toe.
	3. *Differences in Pronunciation*	
Chinese will pronounce the sentence, "Smith left the fortress," as follows: "Smith left the *foltless.*" The L sound is substituted for the R sound.		There is no liquid L sound in the Japanese alphabet. Japanese will say in a hissing sound, "Smith *reft* the fortress," substituting the R sound for L.

The Editor's Page

IT WAS THE British physician Hunter who first emphasized the role of oral sepsis in producing some types of systemic disease. Now another British physician, William Cramer, formerly senior member of the Research Staff, Imperial Cancer Research Fund, London, England, points out that mouth sepsis can be an etiologic factor in the causation of cancer. Cramer expresses the interesting thought that cancer has a social aspect which cannot be overlooked. It has been found that persons low in the social and economic scale are more prone to have cancer in the upper alimentary tract, particularly in the stomach, than those in the higher brackets. It is his belief that defective mastication, because of dental diseases or deficiencies, and the swallowing of infected material from septic mouths are causative in cancer. The lower that people are in the economic and social scale, the more likely they are to have dental diseases and deficiencies. The morbid chain of events is something like this: First, mouth sepsis; then, changes in the gastric mucosa producing chronic atrophic gastritis; next, a degenerative change in the mucosa tending either toward ulcer formation or to the development of a malignant process.

In our zeal in following the theory of focal infection which usually meant the absorption into the blood vascular system of infective matter, we have somehow lost sight of the direct relationship between oral sepsis and gastritis. We have underestimated the danger from direct swallowing of septic matter. We have supposed for a long while that the gastric juices perhaps possessed some power to destroy ingested bacteria. Perhaps the bacteriostatic power of the gastric juices has been overrated by clinicians generally.

In suggesting the social and economic bearings in cancer causation, Cramer, in his excellent article does not overlook the other recognized causes. He conveniently views the subject of cancer etiology from four approaches: (1) the consideration of the carcinogenic agents; (2) the consideration of the precancerous condition; (3) the factor of susceptibility; (4) the time element. There are two general types of carcinogenic agents: exogenous and endogenous. The exogenous ones are those physical, chemical, and mechanical irritants that originate outside the body; the endogenous ones are those internal stresses and strains and irritants that set up an overt chemical stimulation within the organism itself—a disturbance of the normal balance between the hormones is an example of an endogenous carcinogenic agent.

In thinking in terms of precancerous conditions, we must remember Cramer's warning that cancer does not arrive suddenly. The soil is prepared long in advance of its coming and changes in the tissue occur before a full blown cancer develops. One's susceptibility to cancer is a vague and mysterious quality. Cancer has a multiplicity of etiologic factors and the susceptibility of each organ as well as of each person is a variable. We know little about the susceptibility or immunity to any morbid state. Cramer expresses the theorem that "cancer can arise in an organism with either a high susceptibility and a weak carcinogenic stimulus or with a low susceptibility and a strong carcinogenic stimulus." The same theorem likewise applies to all morbid states.

Closely allied to susceptibility is the element of time. This Cramer postulates as follows: "A considerable period of time is necessary for a carcinogenic agent to induce cancer even in a susceptible animal, and this prolonged period varies inversely with the strength of the carcinogenic stimulus and with the degree of susceptibility. It is shortest when a strong stimulus is applied to a highly susceptible animal, and it is very long when the two other variable factors have low values."

Cramer further insists on the recognition of cancer as "a multiplicity of diseases in man." We might say the same of dental caries and the pyorrheal state: Disease, wherever we find it, is not a simple manifestation, but is complex, highly variable, and is surrounded with qualities of the unknown, as Alexis Carrel[2] has observed so indelibly.

We are greatly indebted to Doctor Cramer for reiterating the belief that oral sepsis is a truly morbid state. The French were undoubtedly right in saying, "La mort entre par la bouche."

[1] Cramer, William: The Origin of Cancer in Man, J. A. M. A. 119:309 (May 23) 1942.

[2] Carrel, Alexis: Man the Unknown, New York, Harper & Brothers, 1935.

Compressed Oxygen in the Treatment of Vincent's Infection

I. P. HAYES, D.D.S., Sheridan, Wyoming

DIGEST

It has been found in 387 cases of Vincent's infection that the use of compressed gaseous oxygen is a valuable aid in the treatment of this disease. Hydrogen dioxide and chlorazene are used as auxiliary agents in the treatment.

The following advantages have been proved:

1. Relief from pain has been almost immediate.

2. More rapid recovery has been experienced than in other treatments.

3. The maximum amount of gum tissue has been conserved which is not true where certain caustic and powerful oxidizing agents are used.

4. More tissue will be affected and the penetration is far better with oxygen than with any mouthwash or other medicinal agents that have been used. All saliva and debris can be removed from the infected tissue. This allows the oxygen to reach the organisms more readily.

FOUR YEARS AGO I began using compressed oxygen in the treatment of Vincent's infection. This treatment has now been used in more than 387 cases of the disease, and the conclusion is warranted that compressed oxygen is a valuable adjunct in the treatment of Vincent's infection.

Smears have been made in every case possible, and the organisms were demonstrated in each case. A number of cases of Vincent's infection of the throat have been treated successfully with oxygen. Two cases of Vincent's infection of the head of the penis were treated successfully with oxygen. The latter two cases were diagnosed by a physician by means of a smear and referred to me for treatment.

Hydrogen dioxide and chlorazene were used in combination with the oxygen. Inasmuch as these agents are frequently used separately for this purpose, one may suppose that they are the active agents in the treatment. Of 387 cases for which records were kept, 132 cases were treated successfully with gaseous oxygen as the only agent used. No mouthwash or medicinal agent was employed as a rinse with the exception of normal salt solution. The remaining 255 cases were treated with a combination of hydrogen dioxide, chlorazene, and oxygen. I used the hydrogen dioxide and chlorazene because they not only aid in treating the infection but they have a valuable mechanical action in cleansing the tissue before the oxygen is used, allowing it to penetrate better and more deeply; moreover hydrogen dioxide and chlorazene are useful for home care by the patient, especially when appointments are far apart or infrequent. A mouthwash is not absolutely necessary, but the best results have been obtained by prescribing a mouthwash for home use, preferably half-strength hydrogen dioxide. The free oxygen, however has proved to be the most valuable and most necessary of the agents used. In fifteen cases of bilateral involvement of the gums, hydrogen dioxide and chlorazene were used only on the one side and oxygen was used only on the other side. In each of these cases, the area treated with the oxygen responded more rapidly and healed more quickly than the side treated with chlorazene or hydrogen dioxide.

Probably the most outstanding feature that I have noticed in the treatment of Vincent's infection with oxygen is the immediate relief from pain and soreness. In every case in which pain and soreness were experienced, the pain was relieved within twenty minutes after the first application of the oxygen; the soreness persisted for from one to three days, depending on the severity of the infection. Over a period of four years, forty-three cases have been treated with oxygen successfully after other agents used had failed to relieve the condition. Many of these cases treated were of the recurrent type, but since treatment with oxygen, little recurrence has been observed. Few recurrences, furthermore, have been noted among those with a first infection.

It is a conservative treatment; nevertheless, it seems to achieve remarkably rapid success in most cases. No other treatment I have tried in thirty-five years of practice has conserved as much tissue. Caustics and strong oxidizing agents will destroy any tissue with which they come in contact.

About the only complaint or disadvantage observed in the use of the oxygen is that frequently there will be some pain encountered in spraying the cold oxygen against the teeth.

Mechanism of Supplying Oxygen

The means of supplying the oxygen was arrived at by attaching a rubber tubing approximately 5 feet long to an ordinary tank containing compressed pure oxygen. To the other end of the tubing, I attached a fine nozzle, one from an ordinary chip blower or hand air syringe of the rubber bulb type. The

fine-curve nozzle allows good access to all parts of the mouth. When the application of the oxygen is begun, the dental assistant can control the hand-valve and vary the pressure at will. A more elaborate mechanism has been devised, but this method is just as satisfactory and is inexpensive. It can also be handled conveniently without the aid of an assistant.

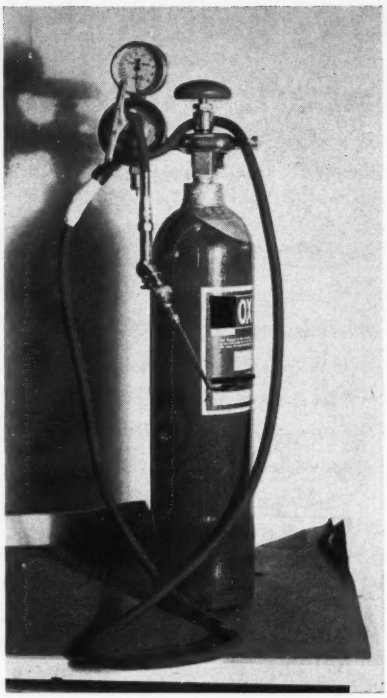
Procedure

1. The mouth is cleaned as well as possible, freed of such loose food débris and calculus that may be removed without injury or pain to the patient. This is to prevent blowing loose particles down the trachea, or into the nasal passages of the patient, and is also a precautionary measure to protect the operator's eyes.

2. With small cotton swabs, a gentle cleansing about the entire gingivae is done. The swabs are dipped in full strength hydrogen dioxide.

3. This is followed by a solution of aromatic chlorazene used on the swabs in the same manner. The hydrogen dioxide and chlorazene doubtless also aid in the removing or the destroying of other mouth organisms, which furthers the treatment a great deal.

4. Beginning with the upper right or left second or third molar, or the most posterior tooth, under low pressure, the oxygen is sprayed around the necks of the teeth, into the gingival crevices and interproximal spaces. The spray is moved forward as the tissue dries and all the saliva is removed. This spraying



Oxygen apparatus used in treatment of Vincent's infection.

is carried out buccally and lingually up to the cuspid on each side.

5. Then the mouth is again rinsed, and the gingivae about the anterior teeth are sprayed in the same manner. In my office, as a mouth rinsing agent, a solution of aromatic chlorazene is used during the treatment. In using the spray, the nozzle should be held as close as possible to the tissue.

6. After the spraying has been done over the mouth under low pressure, the procedure is repeated under high pressure to further the removal of loose débris and sloughed tissue, and to gain greater penetration.

7. After the gums have been thoroughly sprayed with the oxygen, the tongue is treated. As the patient protrudes the tongue as far as possible, the oxygen is forcibly sprayed over the whole dorsal surface, beginning as far back as possible and working forward. The point of the applicator is kept against the tongue and worked back and forth until all the papillae project in a hair-like manner. Many organisms are thus removed, because the tongue is an acknowledged collector of infectious material.

8. In cases in which there is a distinct ulcer on any part of the mouth tissue, treatment proceeds as described, but the oxygen is sprayed forcibly over the infected surface.

9. After all this has been completed, the last step in the technique consists in placing the nozzle in the patient's mouth, with the lips tightly compressed. The mouth is completely filled with oxygen until the cheeks and lips are distended; the excess escapes slowly through one corner of the mouth. This tends to distend and stretch the mucous membranes and allow full contact with the oxygen.

10. The patient is then allowed to rinse the mouth thoroughly.

Subsequent appointments are made according to the severity of the case.

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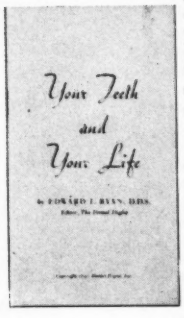
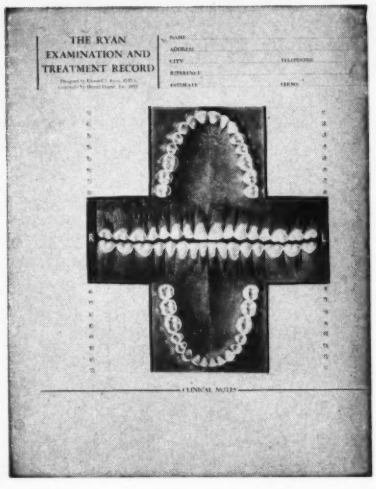
The new booklet, *Your Teeth and Your Life*, illustrated here, is intended primarily for patient distribution. It is written entirely in lay language. Charts tell the essential story. Many dentists are using it (1) as a monthly statement enclosure; (2) in the reception room; (3) as an enclosure with patient recall cards, etc. Prices, 25 for $1.00; 100, $3.00. *The coupon below is for your convenience.*





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Words are Dangerous Weapons . . .

The power of words to exert good or evil has long been recognized, indeed from the beginning of recorded history: "In the beginning there was the Word (logos) and the Word was God . . ." Sir Thomas Browne in his RELIGIO MEDICI, which we are fond of quoting here, said "I had rather stand the shock of a basilisco than the fury of a merciless pen." The observation of the power of the pen as expressed by Bulwer-Lytton was so apt and valid that it has been a truism since the Nineteenth Century: "The pen is mightier than the sword." Before that, Sixteenth Century Robert Burton exclaimed in THE ANATOMY OF MELANCHOLY about "How much more cruel the pen may be than the sword." Shakespeare who always got his inning had Hamlet note that "Many wearing rapiers are afraid of goose-quills." Somewhere in the back of my mind is the notion that Euripides had something to say about this, but so doubtless did many another.

At no time in the history of man has the force and importance of the word been recognized more than today when the printing presses and the radio subject us to all manner of propaganda. It is bad enough to have misinformation seep through to us from our totalitarian enemies, but when we have great newspapers in America feuding with each other, stretching and distorting news to suit their own preconceptions, we are in a spot of considerable danger if we allow ourselves to be duped by any of them. The Federal Government itself is supposed to have 30,000 paid publicity agents in the various departments, turning out releases. The fact that some of these stories emanating from governmental agencies are entirely contradictory makes no difference, it seems.

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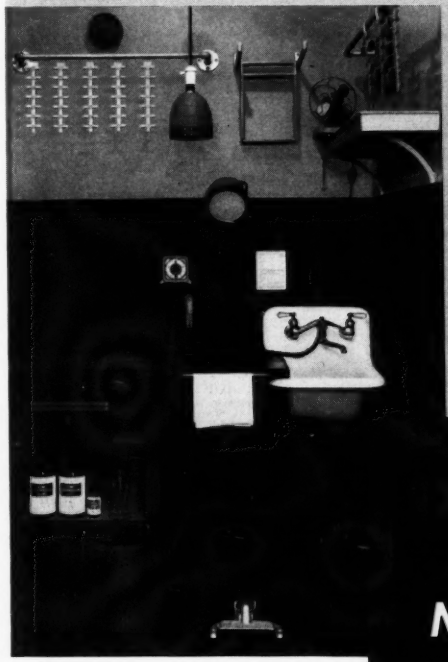

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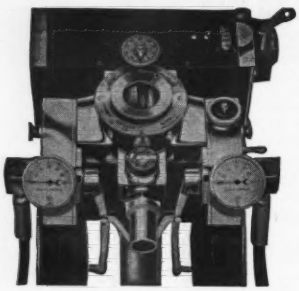

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These are but a few of the Nargraf's advantages. Let us tell you what the Nargraf can do in the way of promoting ideal operating conditions, reducing operating fatigue, and paying its way in increased practice. Return the coupon on page 346.

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In our own small sphere of interest we have had confusion mounted upon confusion from the releases we have received concerning the functioning of the Procurement and Assignment Service and the Rehabilitation Project for Selective Service rejectees. From day to day we do not know exactly what our status is under the Procurement and Assignment Service. One day we are informed that no commissions in the Dental Corps are open; another day we are told that several thousands are immediately available; one day we are informed of a rehabilitation project for 100,000 rejectees and the next day we read that the project has been completely and totally abandoned.

A specific example of the extreme power of words is the incident following a speech made by Mr. Paul V. McNutt before the recent meeting of the American Medical Association. A metropolitan newspaper, *The Chicago Sun*, subsidized by Mr. Marshall Field III, and favorable to the Washington administration, carried this account: "The American Medical Association today, on the second day of its 93rd annual convention, was warned by Paul V. McNutt, chairman of the War Manpower Board, for the second time that organized medicine has not so far lived up to its responsibilities in the war. Mr. McNutt said members of the profession apparently are not interested in volunteering. "The wording of these two sentences immediately excites the reader: *was warned . . . for the second time . . . not so far lived up to its responsibilities in the war . . . are not interested in volunteering*—these are deliberately inflammable expressions which serve to make the reader feel that physicians generally are a recalcitrant group of slackers entirely unmindful of the welfare of the country. We know that this is not a fact. No group in the population has been prompter in giving up excellent positions and pulling up stakes than have the dentists and physicians of the country. *The Chicago Sun* which is a foster brother of the New York newspaper *PM*, which in turn is called the "Uptown" version of the *Daily Worker*, is friendly to the administration. The administration has in the past shown itself unfriendly to the American Medi-

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cal Association. Thus even though the spokesman for the administration, Mr. McNutt, in this instance was not unfriendly to the American Medical Association, *The Chicago Sun* chose to color the incident inaccurately, presumably to rekindle the administration's variance with the American Medical Association. Mr. McNutt's speech, had it been accurately reported, would have been shown to include cooperative and complimentary remarks, but these were entirely omitted in the newspaper interpretation. For example: "But it is my privilege to have worked with you [the American Medical Association] and my pleasure to congratulate you on your vigorous action. No other part of the total manpower job is so well blueprinted today as is the mobilization of medical service." In that paragraph we hear a public administrator speaking in the highest words of praise of an efficient organization. Mr. McNutt did say: "We are not getting enough volunteers . . . It is absolutely necessary that there is an immediate and significant increase in the number of volunteers, or else some other method of procurement will be required soon." This is a forthright statement of an existing state and of an inevitable eventuality if that state persists. In another part of his speech, Mr. McNutt said: "The Procurement and Assignment Service for the War Emergency was set up in collaboration with the medical profession to facilitate the channeling of physicians to military and civilian service. It will not continue after the war. 'All out' collaboration does not involve any theoretical assaults on, or support of, any theory of medical practice."

Now, stressing the need for a greater number of physicians and urging physicians to volunteer is quite different from the newspaper report that said the physicians were "apparently not interested in volunteering." Note, too, that the newspaper item did not play up Mr. McNutt's promise that the procurement and assignment of professional personnel was a wartime measure and will cease after the war. Perhaps this statement was contrary to the plans that some of the leftist newspapers have for medical practice after the war. Mr. McNutt did say firmly and directly and candidly that if voluntary methods for recruitment were not successful, compulsory methods might be necessary. But this is nothing new. Mr. McNutt said this months ago and it was commented on in the dental and medical press at the time.

We started out by writing under the general heading "Words Are Dangerous Weapons," and indeed they are. Any subject or any point of view can be slanted in the telling to suit precon-

Will You Help A Courageous Fellow Dentist?

THE DENTAL DIGEST wants to help a brave dentist by urging that you buy from him something that you would likely be buying anyway — magazines for your reception-room table.

Doctor Russell Panzica has been ill, and unable to practice dentistry for a long time. A limp right leg and a numb left hand—think what that would mean to you.

With rare courage, he has been earning an income for his wife and two-year-old boy. "I will see it through—come what may," he says. Doctor Panzica is selling *Reader's Digest* and *Coronet* subscriptions. You can help him "see it through" by taking a few minutes to send him your own subscriptions, at publishers' regular rates:

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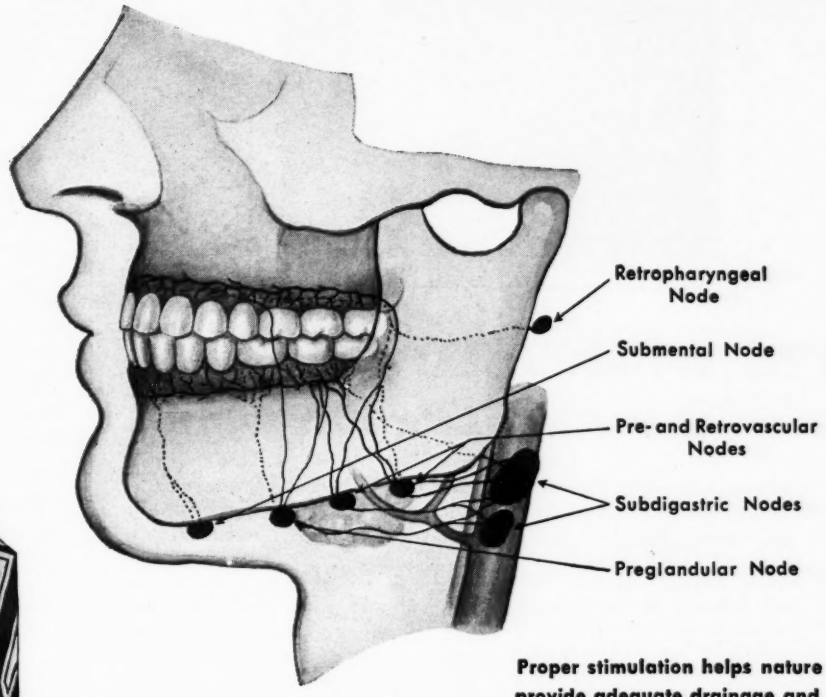

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In your ORAL HYGIENE this month

I'M GOING TO WAR—
How About My Life Insurance?

An insurance counselor, Thomas J. Byrne, suggests methods by which dentists may protect their life insurance investments before entering the armed forces. You'll find this July O. H. article illuminating even though you yourself may not be going to war.

The profession has reason to be proud of this dentist's hobby: Doctor Charles E. Stuart operates the official U. S. listening post for the Chinese government. "Chungking Calling Doctor Stuart," in July ORAL HYGIENE, tells of his work.

"The Public Wants Strong Dental Laws," says Doctor Stanley C. Brown, writing this month about what happened in Michigan.

In "Dental Experts for Transport Companies," Doctor Lloyd D. Morgan tells why "to be successful, one should have a few of the qualities that made Sherlock Holmes famous."

You may violently disagree with Doctor W. N. Miller's "Martial Law for Health," but *don't miss reading it!*

Doctor Herbert E. Weis takes a famous funnyman over the bumps in "Benchley Goes to a Dentist, or Does He?"

Peter T. Swanish, Ph.D., in his department, "This is YOUR Business," discusses post-war planning with especial reference to dentistry's future.

"Military and Defense News" this month reveals some interesting facts about the dental supply situation—and tells why it is *not* true that the Army and Navy are overbuying dental products.

"Ask ORAL HYGIENE" deals with ten interesting cases.

Doctor W. Earle Craig's "Technique of the Month" presents Doctor George E. Cox's "Simplified Technique for Direct Gold Inlays Using a Double Sprue."

Then there's "Editorial Comment." And the always lively "Dentists in the News" and "Laffodontia" and "The Publisher's Corner."

In your July

Oral Hygiene

ceived ends by the choice of words having emotional and prejudicial connotations. This method of distortion allows the reader himself to supply the misinterpretation. The writer provides the words colored to elicit the prejudicial response. We need more enlightenment as a people in the semantic use of our language. We must insist on exact meanings in usage and must look for and challenge inaccuracies and deceptions. If we are not constantly critical in our reading, constantly selective and alert to the methods of propaganda, we will fall under the shadow so disastrously cast by the Germans.

With the appointment of the clear-thinking, straight-speaking journalist, Mr. Elmer Davis, as head of the Office of War Information, we may be hopeful of a little more objective and consistent treatment of war news. If Mr. Davis can regulate some of the pulsing throats of radio commentators and steady some of the emotional hands that push pens and thump typewriters and call the tricks on some of the sleight-of-hand interpretations, he will be doing a good job toward winning the war.

Education Is a Ceaseless Process . . .

On many occasions these contra-opinions have been directed against the auto-inflation of some dentists. As a class we seem to be incapable of admitting errors in professional judgment and failures in technical procedures. The medical literature never hesitates to report cases treated unsuccessfully but the dental literature scarcely ever carries anything but success stories. Most essayists stand before us and tell us of their colossal accomplishments. One would think from hearing them that they never had a lower denture that "floated" or an inlay that was returned in tissue or a mandibular block that failed to "take." It is refreshing, therefore, to read the candid confessions of people who are not afraid to admit their limitations and inadequacies, to admit that they have not attained the pinnacles. The scholarly president of the University of Chicago, Robert Maynard Hutchins, in making the commencement address before the seniors of St. John's College, said: "I have one

(*Continued on page* 348)

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Life doesn't depend on it . . . but "balance" in a toothbrush is an excellent characteristic. The Squibb Angle Toothbrush has "balance." Its unique design makes it easy to handle . . . easy to get at hard-to-reach tooth surfaces . . . easy to do a more effective cleaning job.

Just study its design. The easy-to-grasp handle has a thin sturdy metal shank. This makes it easy to bring the brush head down to the gum line while keeping the handle in practically horizontal position when brushing lingual surfaces of molars. Thus, the bristles are brought in contact with interproximal surfaces and a better cleaning job is made possible.

Notice too, that the brush head is bent at an angle—just like your mouth mirror. It's no problem to reach and clean back molars or lingual surfaces of the incisors. With the Squibb Angle Toothbrush the exposed surfaces of *all* teeth can be reached whether the dental arch is wide or narrow; and with any brushing technique you recommend.

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The Forgotten Tooth Becomes the Remembered Tooth with the

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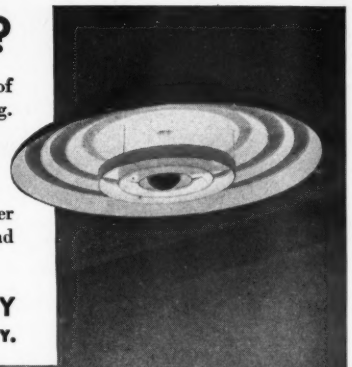

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(*Continued from page* 344)

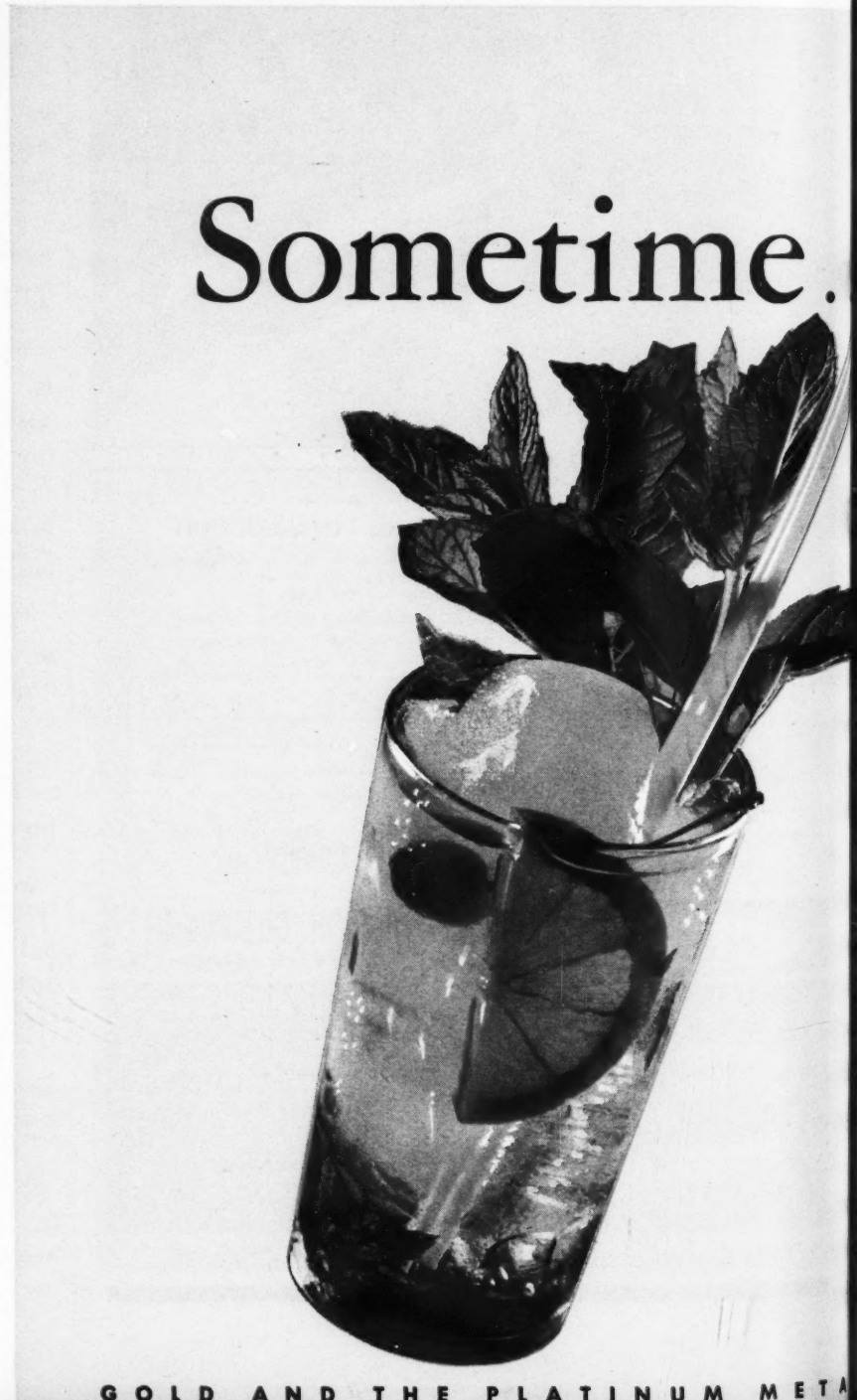
great advantage over you . . . I know that I am uneducated. But I am determined to get an education and I hope that if I keep on working, I may at 64 reach the point attained by a St. John's senior on graduation day. The peculiar thing about education is that if a man does not keep on educating himself, he loses even the education that he has . . ."

It takes a wise man to speak like that. I have known dentists and you have known them, who finished dental college and felt that their education was completed on that day. They never read again, they never studied again, they never tried to refresh their funds of knowledge and these funds diminished and diminished and diminished until all that was left was a pretense. An education is not a terminal. You cannot rightly say of a cultured person that he has had an education. One is either always being educated or he has lost what incipient education he began to acquire. Education is not a fixed and static achievement. It isn't a monument that has been built and stands where it was erected. If that is done with formal schooling, it becomes not a landmark, a stepping stone, but a tombstone, a marker for the dead past. You are either more educated, cultured, understanding, integrated and searching today than you were yesterday or less so; you are not the same; you are either a better dentist showing more skill and judgment and appearance today or a poorer dentist than you started out to be.

As we look around us and see our dental colleagues, we know which ones have improved their skills through the years and are far more competent today than they were the day they graduated from dental college. And we see others unfortunately who were at their highest development of skill and scholarship the day they received their diplomas. Once the supervisions of the dental college were withdrawn from them and the high standards were no longer compulsory, a degradation in their outlook and in their skills set in; the urge to continue their education failed to be inculcated in them during the formal school years. Too many of us are inclined to go to sleep on our oars and to be satisfied with what we managed to accomplish yesterday. Nothing is more pathetically annoying than to hear some dentist try to inflate himself and impress his audience by attempting to recapture his puny glories of another day; to hear him tell of an article he published back in the Nineties or of the technique he developed one time long ago or to listen to him recite his former skills in treating patients, when he still had the zeal to practice well. What counts is how hard we are trying to educate ourselves today, so that we may not lose even the education that we have had, and perhaps may succeed in being better educated tomorrow.

Stop Those Rumors . . .

Wherever you live you have heard two recent rumors: (1) that the war will end in 1942; (2) the lament-type of rumor about what's going to happen to the civilian population when so many dentists and physicians are taken



into the Services. I contend that both ideas have sprung from enemy agents. If you can make people think that the war will end quickly and conclusively, they will slow up in production efforts, in buying War Bonds, in the zeal to prosecute the war. If you can get the folks at home to worry about who is going to care for them when they are sick and in trouble, the seeds of despair to undermine morale are well sown. If a chap in the Service is told that in the community that he comes from there is a scarcity of physicians and dentists and there is no one to cure his baby who has the colic, to tend his wife in her travail, no one to assuage the aches and pains of aged parents—there is a soldier who is disturbed. Given a soldier who is disturbed, and there is a poor soldier. The French know that too well now. To cast doubt in the minds of the French soldiers regarding their dependents at home, the Germans disseminated exactly that kind of false rumor.

For several months patients have been asking dentists what they are to do now that the dentists are to be called into Service in large numbers. They ask the question with apprehension. I believe that the American dental profession and the American medical profession and certainly the government owe it to the people to say, vigorously and unequivocally, that regardless of how many dentists and physicians are called to war there will still be enough left to give adequate attention to the folks at home. There may be some inconveniences, to be sure, and some changes in long established professional relationships.

It is true that an army of 9 million men will take 12 per cent of our male population and this army will require 33 1/3 per cent of our medical service personnel. It must be remembered that the ratio of dentists and physicians needed for the armed forces is much different from the ratio for the civilian population. More dentists and physicians are needed per thousand to care for the armed forces because the demands for their services come with greater suddenness and by large groups at once. Furthermore the casualties among the medical officer personnel are about the same proportion as among the enlisted personnel; therefore, replacements and reserves are necessary in proportions that are never required in civilian life.

Let us quash such rumors that the government is totally indifferent to the medical needs of the population; let us tell people who are disturbed that there will be few who will ever have to go without needed attention. To affirm the fears of the people that they are not going to be adequately cared for by dentists and physicians is to give warming comfort to the enemy.—E. J. R.

. when you have a
spare moment and
a long, cool drink...

IS AN IMPOSITION to ask extra-curricular thinking
this summer heat—BUT, sometime when you're cool
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a simple way to make accurate inlays, crowns, etc.

Fig. 1 — Section of MOD preparation.

Fig. 2 — Front view of M O D preparation showing natural curved margins.

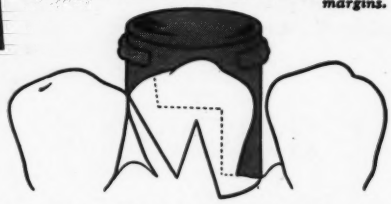

Fig. 3 — Way to trim band for M-O or D-O preparation.

Fig. 4 Preparing the Band

The band should be unannealed copper. Slit buccal and lingual for M-O-D preparation. Slits provide necessary flexibility of copper band. No slits are necessary for jacket crown impression. Slit only on buccal for ¾ crown impression. Slots at top of band allow some material to flow through and provide mechanical retention. (See excess in Fig. 5.)

Fig. 4

Fig. 5 Making the Impression

Though material flows readily, it is firm enough to force the gingival tissues back. This permits making an absolutely accurate impression of the gingival margin, no matter how far below the gum line it may be.

Note in Fig. 2 it is possible to accurately reproduce natural curved margins heretofore impossible with ordinary impression materials.

Fig. 5

Fig. 6 Ready for Die Making

Completed impression is an exact negative of tooth. Note that Dr. Dietrich's Elastic Impression Material at the base of the tooth has sprung back to its original shape without distortion. Die is made of stone or amalgam. Impression may be copper plated.

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Complete facts on the technique of using this improved method of making impressions is contained in our treatise on Dr. Dietrich's Elastic Inlay Impression Material. Write today for your copy. No charge.

Fig. 6

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